

Major Accident Hazard in Bioprocess Facilities: A Challenge to Sustainable Industrial Development

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Abstract:

Bioprocesses are generally perceived as safer technologies, having a lower impact than conventional chemical processes, in recent years several accidents affected this industrial sector. A biotechnological process which is also known as bioprocess is a process that uses microbial organisms, animal or plant cells, or components of cells such as enzymes, to obtain products or to complete a chemical transformation [1]. The process is an integration between chemical engineering and biotechnology. Some recent accidents involving the bioprocess raised concern on the safety of such technologies. Malaysia is one of the few Asian countries that has most of its bio safety regulations and guidelines in place. In spite of the government is driving the sector in full force, there are still missing links and challenges. The bioprocess of L-Methionine production which is one of the BTP Trigger Projects was taken as a case study.

Keywords: : Major Accident Hazard; Hazard Identification; Bioprocess; Sustainable Industrial Development

ACKNOWLEDGMENT

This study was financially supported by Universiti Malaysia Pahang (research grant RDU1703165).